

United States Government

Department of Energy

Oak Ridge Office

memorandum

DATE: February 6, 2007

REPLY TO

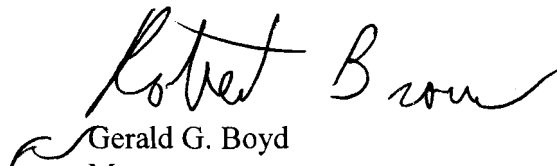
ATTN OF: SE-30: Kelly

SUBJECT: **ANNUAL WORKFORCE ANALYSIS AND STAFFING PLAN REPORT**

TO: Roy J. Schepens, Chairman, Federal Technical Capability Panel

In accordance with the Federal Technical Capability Program Corrective Action Plan, I am pleased to provide you with the Oak Ridge Office Annual Workforce Analysis and Staffing Plan Report for CY 2006. The analysis follows the Federal Technical Capability Program Panel guidance.

Should you have questions regarding this Report, please feel free to contact me at (865) 576-4444 or Larry Kelly at (865) 576-0891.


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**U.S. Department of Energy
Oak Ridge Office**



**Annual Workforce Analysis
and
Staffing Plan Report
for
Federal Technical Personnel**

January 2007

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Annual Workforce Analysis and Staffing Plan Report**As of December 31, 2006****Reporting Office: Oak Ridge Office****Section One: Current Mission(s) of the Organization and Potential Changes****General**

Based in Oak Ridge, Tennessee, the Department of Energy's (DOE) Oak Ridge Office (ORO) dates back to World War II when the organization played a major role in the production of enriched uranium for the Manhattan Project. Since then, ORO has expanded far beyond that first mission, and today is responsible for major DOE programs in Science, Environmental Management, Nuclear Fuel Supply, and National Security. In addition, as part of the One Science (1SC) Integrated Support Center (ISC), ORO provides support to science laboratories and facilities operated by DOE throughout the United States.

The majority of ORO programs are performed at facilities located on the 33,725-acre Oak Ridge Reservation located in Anderson and Roane Counties in East Tennessee. The Oak Ridge facilities include the Oak Ridge National Laboratory (ORNL), environmental clean-up sites located at the Y-12 National Security Complex, and the East Tennessee Technology Park (ETTP). Also, Oak Ridge is the home for the American Museum of Science and Energy and the Oak Ridge Institute for Science and Education (ORISE). Approximately 12,000 contractor and 400 Federal employees work at the Oak Ridge facilities. In addition, ORO, under 1SC, is part of the ISC and provides routine technical support to Berkeley Site Office, Stanford Site Office, Thomas Jefferson Site Office, and, as requested, to other SC sites and organizations.

Specific

The **Office of the Assistant Manager for Environmental Management (AMEM)** is responsible for the operation and remediation of the following types of facilities with compliant Documented Safety Analyses (DSA) management and proper maintenance of related safety systems. Projects include:

- Three Building D&D Project
- TRU Project
- Melton Valley Closure Project
- East Tennessee Technology Park Closure Project
- Balance of Reservation Program
- David Witherspoon Sites
- U²³³ Downblending & Disposition Project

Potential changes include:

- Planning has begun for two additional closure projects which could begin in one to two years, dependent upon approvals and appropriations (that is, demolition of 182 facilities at ORNL and disposition of 1.9 Million ft² of contaminated and non-contaminated facilities at NNSA Y-12).
- Construction for the U²³³ Downblending & Disposition Project is dependent upon approvals and appropriations.
- Legacy Waste Project is nearing completion. Therefore, a decrease in Project activity is anticipated.

In the management of the above Project and related activities, AMEM:

- Ensures that contractor-executed functions are carried out in a manner that protects Government and contractor personnel and the general public against all environmental, safety, and health (ES&H) hazards arising from the performance of the contract work.
- Performs the full range of project management activities in accordance with Federal and DOE laws, procedures, and directives.
- Ensures that the principles of Integrated Safety Management (ISM) are fully integrated into all work activities.
- Implements the requirements for safe operations of nuclear facilities, including safety basis process requirements and flow down of approved safety basis documents.

The **Office of the Assistant Manager for Science (AMS)** implements the Department's Science and Energy missions through management of contracts for the operation of ORNL, ORISE, the U.S. Department of Commerce Atmospheric Turbulence and Diffusion Division (ATDD) (as it pertains to DOE work), and other research and development (R&D) contracts assigned by DOE Headquarters (HQ) to ORO. These activities center around four major functions: contract management, program implementation, Federal stewardship, and AMS management. Program implementation responsibilities include all programs and projects conducted under the ORNL and ORISE contracts, regardless of funding source.

In the management of ORNL and ORISE contracts, AMS:

- Ensures that contractor-executed functions are carried out in a manner that protects Government and contractor personnel and the general public against all environmental, safety, and health (ES&H) hazards arising from the performance of the contract work.
- Performs the full range of project management activities in accordance with Federal and DOE laws, procedures, and directives.
- Manages ORO's scientific and technical information programs.
- Ensures that the principles of Integrated Safety Management (ISM) are fully integrated into all work activities.
- Implements the requirements for safe operations of nuclear facilities, including safety basis process requirements and flow down of approved safety basis documents.

The **Office of the Assistant Manager for Nuclear Fuel Supply's (AMNFS)** current mission is to implement the DOE Office of Nuclear Energy, Science, and Technology (NE) NE-60 programmatic missions, including:

- The monitoring of the operation of the Centrifuge Technology Center (CTC), Centrifuge Testing in K-1600, Lead Cascade Demonstration, Commercial Plant Development, and Paducah Gaseous Diffusion Plant (PGDP) operability and viability.
- Serving as the primary interface for the Cooperative Research and Development Agreement (CRADA) with the USEC Inc. for centrifuge development work.
- Responsible for administering the Lease Agreement/Regulatory Oversight Program with USEC, providing leadership and technical support for the development and deployment of advanced uranium enrichment technology, and supporting the DOE NE in the lease/transfer of facilities for the gas centrifuge commercial plant.
- Providing program/project management and technical assistance in the areas of lease administration, shipping, and transportation. Technical assistance also includes development of

land and facility transfers to reduce program costs for surveillance, maintenance, utilities, and landlord-type administrative expenses.

- Assuring that the principles of ISM are fully integrated into all activities.
- Executing these objectives through the Regulatory Management Team, the Nuclear Fuels Management Team, and the Reindustrialization and Technical Assistance Team.

The **Office of the Assistant Manager for Security and Emergency Management's (AMSEM)** mission is to provide advice and counsel to the ORO Manager, Chief Operating Officer, and line managers regarding all aspects of safeguards and security program planning and management and emergency management operations. The mission involves the protection of people, information, special nuclear material (SNM), and other critical assets, as well as violence in the workplace, intelligence, and related matters of special sensitivity. The organization administers the safeguards and security and emergency management programs for ORO including industrial security, physical security, information security, cyber security, materials control and accountability, personnel security, classification, export control, and administration of the Security Police Officer contract. It orchestrates and implements ORO's plans for responding to emergencies, including development of appropriate communications systems, periodically performing exercises and drills, implementing the Lead Federal Manager concept, delineating roles and responsibilities during activation of the ORO Emergency Operations Center, and managing the Region 2 Radiological Assistance Program. The principles of ISM and Integrated Safeguards and Security Management (ISSM) are incorporated into the AMSEM mission and activities.

In terms of potential changes, the mission is expanding in Personnel Security to incorporate Personal Identity Verification (PIV) as required by Homeland Security Presidential Directive-12 (HSPD-12). This new mission will continue to expand through Fiscal Year 2008 when biometrics will be applied for virtual access to cyber assets. Construction of the United States Enrichment Corporation's Lead Cascade will potentially add to the security mission, most notably in personnel security and facility approvals and inspections through FY 2010. Accelerated cleanup at the Gaseous Diffusion Plants (GDPs) will progressively decrease security interests at the GDPs and commensurately reduce the existing security mission at those locations through 2010.

The **Office of the Assistant Manager for Environment, Safety, and Health (AMESH)** is responsible for developing effective and efficient environmental protection, safety, health, and quality programs and guidance applicable to all ORO programs and contractors. In addition, AMESH is part of the One Science Integrated Service Center and provides ES&H support to other SC sites. AMESH is a matrix technical support provider to, and partners with, ORO and other SC organizations for the development, implementation, and continuous improvement of safety processes, along with conducting oversight, assessments, and reviews. In addition, AMESH serves as the independent assessor on behalf of the ORO and other SC Managers to provide feedback on the effectiveness of Federal and contractor ES&H activities. In its roles as technical support provider, partner, and independent assessor, AMESH works to ensure that ISM principles are being effectively implemented by ORO and SC organizations and contractors.

The **Office of the Assistant Manager for Administration (AMA)** supports the ORO technical and nontechnical organizations in areas such as human resources, training and development, directives management, information services, and procurement and contracting. In carrying out its responsibilities, AMA ensures that ISM principles are being effectively implemented.

Section Two: Technical Staffing**Site Characteristics:** ¹**Number of Hazard Category 1, 2, or 3 Nuclear Facilities:**

HC 1: AMEM – 0, AMS – 1

HC 2: AMEM – 37, AMS – 3

HC 3: AMEM – 8, AMS – 4

Number of Radiological Facilities²: AMEM – 86, AMNFS – 4, AMS – 28**Number of High or Moderate Hazard Non-Nuclear Facilities:** AMEM – 2, AMNFS – 0, AMS (All non-nuclear facilities overseen have a Facility Hazard Value < 15)**Number of Low Hazard Non-Nuclear Facilities:** AMEM – 34, AMNFS – 0, AMS (All non-nuclear facilities overseen have a Facility Hazard Value < 15)**Number of Documented Safety Analyses:** AMEM – 13, AMNFS – 1, AMS – 8**Number of Safety Systems**³: AMEM – 26, AMNFS – 1, AMS (Does not have a need for safety system engineers. AMS does not manage or oversee any defense related nuclear facilities. The Offices of Science and Nuclear Energy have elected to not require the Safety System Oversight program to non-defense related facilities.)**Number of Site Contractor FTEs:** ~12,000**Number of Federal Office FTEs:** ORO – 394**Security Facilities**⁴: 31

- 3 Facilities with Security Importance Rating A
- 26 Facilities with Security Importance Rating B
- 2 Facilities with Security Importance Rating C

Notes:

1. Sites accountable to multiple Headquarter Program Offices should list FTE needs by each Cognizant Secretarial Office, e.g., Total 22 FTEs (EM – 20, NE – 2).
2. Radiological Facilities are defined in 10 CFR 830 as below Hazard Category 3 Facilities. Hazard Category 1, 2 or 3 Nuclear Facilities should not be double counted as Radiological Facilities.
3. Safety Systems must be credited in a Documented Safety Analysis.
4. An “A” Facility is engaged in administrative activities essential to the overall DOE nuclear weapons program; is authorized to possess Top Secret matter; or possesses Category I quantities of Special Nuclear Material (SNM). A “B” Facility is engaged in activities other than those categorized as “A”; authorized to possess Secret Restricted Data or weapons data; designated a Field Intelligence Element; and, or authorized to possess Category II quantities of SNM. A “C” facility may possess Categories III or IV quantities of SNM or other nuclear material; and is authorized to possess matter other than the type categorized for “A” or “B.”

Technical Staffing Summary Table ¹			
Technical Capability	For All Facilities ¹		Comments
	Number of FTEs Needed ¹	Number of FTEs Onboard ¹	
Senior Technical Safety Managers	16	16	
Safety System Oversight Personnel ²	2.1	1.64	
Facility Representatives ³	22.8	22	
Other Technical Capabilities:			
Aviation Safety Manager			
Aviation Safety Officer			
Chemical Processing			
Civil/Structural Engineering			
Construction Mgmt	6	6	
Criticality Safety	.75	.75	
Deactivation and Decommissioning	7	7	
Electrical Systems	0.5	0.5	
Emergency Management	6.5	6.21	
Environmental Compliance	4.5	4.1	
Environmental Restoration	6.5	6.5	
Facility Maintenance Mgmt	2	2	
Fire Protection Engineering	0.4	0.4	
Industrial Hygiene	3	3	
Instrumentation and Control			
Mechanical Systems	2	2	
Nuclear Explosive Safety			
Nuclear Safety Specialist	7.75	3.75	4 FTEs account for support contractors
Occupational Safety & Industrial Safety	4	2.5	0.6 FTE in contractor support used (Construction & Electrical combined in Industrial Safety)
Quality Assurance	5.5	5.5	
Radiation Protection	2	2	
Safeguards and Security	30.7	27.55	
Safety Software Quality Assurance			
Technical Program Manager	9	9	
Technical Training	3.25	1	Currently being met by contract support
Transportation & Traffic Mgmt	2.25	2.25	
Waste Management	6.6	6.6	
TOTAL ⁵	152	139.15	
Federal Project Directors ⁴	7	7	
Notes:			
1. These columns identify the number of FTEs needed to perform the Federal Safety Assurance function for ORO based on potential facility and operational hazards.			
2. SSO staffing analysis worksheets may be used in this process. They are posted at http://www.ftcp.org .			
3. Facility Representative staffing analysis worksheets are posted at http://www.ftcp.org .			
4. Federal Project Managers/Directors at ORO are qualified via the Technical Qualification Program in their technical discipline and the Project Management Career Development Program in accordance with DOE O 361.1A.			
5. There are an additional qualified 5 Senior Technical Safety Managers (STSs) and 33 subject matter experts (SMEs) in AMESH who provide technical support to ORO and other SC organizations as specific needs emerge.			

Section Three: Current Shortages and Plans for Filling Them**AMEM:**

Facility Representatives (FRs): The current on-board FR staffing levels of 17 are adequate to properly oversee both the nuclear and non-nuclear facilities and projects in AMEM. One FR was transferred to NNSA with the facilities that treat newly generated waste. The hiring of any additional FRs will not occur until the confidence in future remediation projects increases and the need for additional FRs is evaluated. This status is reevaluated annually and as work scope changes.

Safety System Oversight (SSO) Personnel: AMEM currently has 26 safety systems identified in 13 DSAs and AMEM has a need for 2 SSO FTEs. The SSO disciplines are Criticality Accident Alarm System, Instrumentation and Control, Ventilation Systems, and Fire Protection, and they are covered by four individuals. Even though a fire protection SSO was hired during 2006, AMEM's level of needed support is approaching 1 FTE. AMESH is currently recruiting for an additional Fire Protection Engineer that should help address these additional resource needs.

Subject Matter Experts (other technical capabilities): Subject matter experts support for AMEM with day to day operations and oversight activities is provided in 15 different disciplines by 34 FTEs. Subject matter expertise is furnished by expertise either full-time AMEM employees or individuals that are dedicated to AMEM under an organizational matrix arrangement. In the isolated and unusual circumstances where additional expertise (such as in the area of occupational safety or environmental compliance) may be needed for an emerging or unplanned activity, appropriate compensatory arrangements are available through other local ORO organizations, personnel from other DOE sites, and/or contract consultants.

AMS:

The analysis of staffing needs for FRs was performed in accordance with Appendix C of DOE Standard 1063, Facility Representatives. The results of the analysis show that AMS currently has sufficient FR coverage available for nuclear facilities. The AMS management elected to include FR oversight of the two accelerators operated at ORNL. On-board FR staffing levels remain adequate to properly oversee these facilities.

Non-nuclear facilities do not score high enough to justify FR oversight other than management discretion. A consolidation of nuclear facilities and activities is currently underway. The onboard FR resources offer some limited reserve capacity that can be devoted to training, emerging issues, etc. As consolidation efforts reduce needed FR coverage, attention and oversight will be focused toward groups of facilities that contain hazards to workers or co-located employees, but remain below the coverage priority values requiring coverage.

Many AMS facilities do not require formal FR coverage, and are subject to the formal oversight and assessment programs established by the AMS. These programs include the Integrated Assessment Program system of formal programmatic and focused audits and assessments to the less formal walkthroughs conducted as part of the Operational Awareness Program.

Day-to-day operations and oversight efforts are a primary function of the AMS organization. Eleven individuals augment oversight efforts by offering 13 needed disciplines. SMEs for fire protection, criticality safety, and transportation safety are provided via consultation from another ORO organization on a routine basis commensurate with the support levels identified. The remaining SME support is

provided through AMS employees, or individuals dedicated to AMS under an organizational matrix arrangement. In the isolated case where additional expertise may be needed for an emerging or unplanned activity, appropriate arrangements are available through other local ORO organizations, personnel from other DOE sites or contract consultants.

AMNFS:

Results of this workforce analysis indicate that one Facility Representative is needed to perform the additional duties identified above in Section One. This Facility Representative is needed at the East Tennessee Technology Park (ETTP) to provide oversight of the lessee's centrifuge deployment activities at that location. Current options for filling this position is either posting for competitive bid or performing a desktop audit to utilize existing personnel.

Current options for filling this position are either posting for competitive bid or exploring retraining options of existing personnel to meet any future needs.

AMSEM:

Factoring in contractor support activities (including those recently acquired and planned), current staffing levels are minimally adequate to achieve existing work.

However, special assignments like the extended-time assignment of two employees to Source Evaluation Boards (SEBs) and the vacancy in the Security Oversight and Support Branch have stressed the Division and pressed the work envelope to its maximum. When the current SEB assignments terminate, it is realistically anticipated that at least three security employees will be required fulltime for a transition period of at least three months. In FY 07, the issuance of new security badges for all federal and contractor employees will begin under Homeland Security Presidential Directive-12 (HSPD-12) along with HSPD-12 personal identity verification, records maintenance, and coordination of installation of new access hardware at all locations under ORO security cognizance and facilities supported under the ORO ISC concept. This potential net expansion of work levels coupled with retirement eligibility for almost half the staff—17 of the 32 positions are either eligible to retire now, or within the next five years—will require considerable assessment.

AMESH:

AMESH has 5 STSMs and 33 technically qualified SMEs who are routinely called upon by the ORO and SC organizations to support emerging issues, oversight, and assessment activities, and various reviews. In addition, AMESH partners with line organizations to develop, implement, and continuously improve safety processes. In the near term, needs have been identified for College Recruitment in the areas of Industrial Hygiene (1 position), Health Physics (1 position), and Nuclear Engineering (Criticality Safety) (1 position). However, these needs do not consider losses due to retirement, internal and external job changes, etc. These needs are being factored into the overall ORO staffing analysis for consideration.

AMA:

None.

Section Four: Projected Shortage/Surplus Over Next Five Years**AMEM:**

In the next few years, there will be an overlap of new closure project starting and the completion of the current closure projects. For approximately two years, the technical and management staff may need to further allocate their time due to a fluctuating and increasing workload. Due to the relatively short duration of this increased workload, it is not considered necessary to increase federal staff. If required, contract support staff will be used during this period. The technical capabilities of the staff will be reevaluated during this time to insure an appropriate mix of skills is available to adequately manage and oversee the new closure projects.

AMS:

AMS resource loads and vulnerabilities are evaluated on a real time basis. Within the Oak Ridge Office as a whole, organizational units stay closely interfaced as mission changes both demand as well as free-up resources. During the past year, AMESH has staffed up specific expertise to support the SC mission needs for the future.

AMNFS:

For the foreseeable future, the need for this capability at this location is expected to continue. As long as the DOE lessee maintains the lease agreements with DOE for the continued development and deployment of the gas centrifuge technology, oversight of lessee activities is considered essential. Therefore, the indicated need for local Facility Representatives will remain.

AMSEM:

Seventeen of 32 onboard AMSEM employees are eligible to retire now, or within the next five years.

AMESH:

With the projected retirements and the potential for both internal and external job changes, AMESH must ensure that the appropriate number of personnel, with the appropriate skill mix, is available to support work activities. Over the next five years, approximately 21 people will be eligible for optional retirement.

AMA:

None.

Section Five: General Comments or Recommendations Related to the Technical Staffing

AMEM:

It is anticipated that at least three senior technical managers, six facility representatives, and four others from the technical capabilities chart will be retirement eligible. Though there is no specific data on the potential attrition, it must be considered due to the increasing age of the workforce and the lack of hiring junior replacements.

AMS:

None.

AMNFS:

Due to the classification level of the gas centrifuge technology, each individual must have a Q security clearance.

Additionally, as the prime onsite interface with the lessee, a Facility Representative should be a mature individual with good interpersonal and communications skills. Each individual should be technically competent with an overall understanding of each functional element in the lease agreement (e.g., engineering, operations, maintenance, radiation protection, nuclear criticality safety, and security).

AMSEM:

The current skill mix is adequate. All but three positions are designated in the technical qualification program.

AMESH:

The requirements that the Department is implementing as a result of DNSFB Recommendation 2004-1 and the implementation of 10 CFR 851 may have an impact on staffing levels and the skill mix needed to perform the AMESH mission.

AMESH has begun to address the concern that some critical positions are only "one deep."

AMA:

None.

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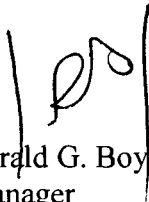
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SE-30:LKelly:bgattis:576-0891:1/26/07:n/se30/bjg/Annual Workforce and Analysis Staffing Plan – 2006 (report and other related material at same location) File Code: _____

Concurrence
Routing Symbol SE-30 Initials/Signature Kelly Date 1-26-07
Routing Symbol NS-50 Initials/Signature Clark Date 1/29/07
Routing Symbol OS-20 Initials/Signature Thress Date 1/30/07
Routing Symbol AD-40 Initials/Signature Wilken Date 2/1/07
Routing Symbol AD-42 Initials/Signature Howse-Smith Date 1/31/07
Routing Symbol AD-443 Initials/Signature Vosburg Date 1-29-07
Routing Symbol EM-90 Initials/Signature McCracken Date 2/2/07
Routing Symbol SC-10 Initials/Signature Moore Date 2/2/07
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